

REMARKS

The Applicants have now had an opportunity to carefully consider the comments set forth in the Office Action mailed April 24, 2006. All of the rejections are respectfully traversed. Reexamination and reconsideration of the application are respectfully requested.

The Office Action

In the Office Action mailed April 24, 2006:

The persuasiveness of the remarks filed December 9, 2004 was acknowledged;

claims 1-18, 20 and 23 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite;

claims 1-7, 16, 17 and 19-23 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,516,157 to Maruta, et al. ("Maruta"); and,

claims 8-15 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Maruta.

The Present Application

By way of brief review, the present application is directed toward a configurable billing module that can support, by virtue of its configurability, a wide variety of machines and systems. For example, the billing module can support or perform accounting functions for a variety of document processing systems. For instance, the billing module accepts a billing strategy from an associated document processing system. The billing strategy lists parameters, events, or aspects of interest that the billing module is to monitor. Additionally, the billing strategy provides algorithms that define the function of billing meters. The billing module can instantiate and/or update the meters based on the monitored parameters or aspects of interest as indicated by the billing strategy. The list of aspects of interest and the list of meter descriptions may be arbitrarily long. The ability of the billing module to receive and interpret arbitrary or custom billing strategies allows the billing module (or the software associated with the billing module) to be reused in a wide variety of applications. Device developers need only define the billing strategy, therefore, the need to "hard code" custom billing software for each new device is

eliminated. For example, the billing strategy includes a script for instantiating and updating billing meters, and includes implicit or explicit communication mechanisms and data parsing information. (Abstract, page 1, lines 13-17, page 6, lines 1-3, lines 13-17, page 7, lines 25-26, page 9, lines 14-29).

The Newly Cited Reference

In stark contrast, the newly cited reference to Maruta does not disclose or suggest a configurable billing system including a coded billing strategy. Instead, it is respectfully submitted that Maruta discusses a printing system that calculates printing cost using data input via a remote data input terminal and returns calculated printing cost to the remote data input terminal.

Maruta explains that the cost calculation is based on the type of document being printed. The system of Maruta includes four counters identified as --color small--, --color large--, --black-and-white small-- and --black-and-white large--. The count value of the counter corresponding to each type of document is incremented every time a relevant document is read by a pre-scanning operation. When the pre-scanning operation for all the documents is completed, the corresponding unit cost is multiplied by the count value of each counter and the total sum thereof obtained. The total sum is displayed as shown in FIG. 8C on a liquid crystal panel 421 in operation panel 640. The user can identify the cost of a desired copy job beforehand to decide whether to modify the job or to initial the intact copy job (column 9, lines 19-41).

It is respectfully submitted that Maruta does not disclose or suggest that the four counters of Maruta are anything but the "hard coded" variety discussed, for example, on page 1, line 20 - page 2, line 28, and, more particularly, on page 2, lines 21-28, of the present application. It is respectfully submitted that the billing system of Maruta is not configurable. Furthermore, even if the billing system of Maruta could be construed as being configurable, the billing system of Maruta does not include a coded billing strategy such as that depicted, for example, in FIG. 2 and FIG. 4 of the present application and discussed, for example, on page 6, line 11 - page 7, line 14; page 7, line 25 - page 9, line 28; page 10, line 24 - page 12, line 14.

Furthermore, even if Maruta could be construed as disclosing a configurable billing system including a coded billing strategy, Maruta does not disclose or suggest

a configurable billing system including a coded billing strategy that includes a list of aspects of interest and a list of meter descriptions. Moreover, Maruta does not disclose or suggest a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions.

The Claims are Definite

Claims 1-18, 20 and 23 were rejected under 35 U.S.C. §112, second paragraph as being indefinite for including the term "arbitrarily" in claims **1, 6, 16, 20 and 23**. The Office Action asserts that the term "arbitrarily" is a relative term which renders the claim indefinite and asserts that one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The Applicants respectfully disagree.

Merriam-Webster's Unabridged Dictionary: copyright 2000, defines arbitrarily as: in an arbitrary manner: at will.

arbitrarily : in an arbitrary manner : at will <the genus will here be rather arbitrarily described as though it were one man W.S.White> <inflexible rules, arbitrarily ordained Havelock Ellis> <arbitrarily set the lunch hour at one o'clock>

The same reference defines arbitrary as 1: depending on choice or discretion; 2a(1): arising from unrestrained exercise of the will, caprice or personal preference: given to expressing opinions that arise thus (2); selected at random or as a typical example; b : based on random or convenient selection or choice rather than on reason or nature; and 3a: given to willful irrational choices and demands : IMPERIOUS; b: characterized by absolute power or authority.

arbitrary : depending on choice or discretion; specifically : determinable by decision of a judge or tribunal rather than defined by statute <an *arbitrary* decision> <*arbitrary* punishment>

2 a (1) : arising from unrestrained exercise of the will, caprice, or personal preference : given to expressing opinions that arise thus **(2)** : selected at random or as a typical example <such *arbitrary* items as clothing, room furnishings, travel *Official Register of Harvard University*> **b** : based on random or convenient selection or choice rather than on reason or nature <an *arbitrary* symbol> <*arbitrary* division of historical studies into watertight compartments A.J.Toynbee> **c** *Britain, of a printing character* : not usually found in the ordinary type font

3 a : given to willful irrational choices and demands : IMPERIOUS <a man of iron will and *arbitrary* decision> **b** : characterized by absolute power or authority : DESPOTIC, TYRANNICAL <*arbitrary* rule> <an *arbitrary* governor>

It is respectfully submitted that one of ordinary skill in the art would understand that an arbitrarily long list would have a length depending on choice or discretion based on convenient selection or choice. As further evidence of this, we submit the following discussion of --arbitrarily large-- found on the internet website Wikipedia, in which we have highlighted a notation acknowledging the existence of the terms "arbitrarily small," "arbitrarily long" and other similar phrases.

In mathematics, the phrase **arbitrarily large** is used in contexts such as:

$f(x)$ is true for arbitrarily large x

which is actually shorthand for:

for every $N \in \mathbb{R}$, $f(x)$ is true for at least one $x \geq N$.

This should not be confused with the phrase "sufficiently large". For instance, it is true that prime numbers can be arbitrarily large, but it is not true that all sufficiently large numbers are prime. It is also worth noting that "arbitrarily large" does not mean "infinitely large" - for instance, while prime numbers can be arbitrarily large, there is no such thing as an infinitely large prime.

In some cases, phrases such as " $f(x)$ is true for arbitrarily large x " is used primarily for emphasis, as in " $f(x)$ is true for all x , no matter how large x is." In such cases, the phrase "arbitrarily large" does not have the meaning indicated above, but is in fact logically synonymous with "all."

One can of course define terms such as "arbitrarily small," "arbitrarily long," and others in a similar manner.

It is respectfully submitted that the phrase --arbitrarily long-- is not a relative term. However, even if the phrase --arbitrarily long-- is considered to be a relative term, the fact that claim language, including terms of degree may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph. Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification (MPEP 2173.05(b)). Since, as explained above, one of ordinary skill in the art would understand what is claimed, it is respectfully submitted that **claims 1, 6, 16, 20 and 23**, as well as **claims 2-5, 7-15, 17 and 18**, which depend respectively therefrom, are not indefinite. Therefore, reconsideration and withdrawal of the rejections under 35 U.S.C. 112, second paragraph, are respectfully requested.

The Claims are not Anticipated

Claim 1-7, 16, 17 and 19-23 were rejected under 35 U.S.C. §102(e) as being

anticipated by Maruta.

However, in support of the assertion that Maruta discloses a configurable billing system including a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine, the Office Action directs the attention of the Applicants to column 10, lines 1-10. It is respectfully submitted that the cited portion of Maruta explains that the cost calculation process (S104) will be described in detail with reference to FIG. 10. The copy operation process (S105) is directed to execute a copy operation sequence. When "cost calculation" is selected at the initial screen of FIG. 8A, the rate is displayed according to the cost calculation process, and a copy operation is executed after confirmation is made of the indicated cost. When "start copy" is selected at the initial screen of FIG. 8A, a copy operation process is immediately executed by turning on start key 642.

It is respectfully submitted that nothing in column 10, lines 1-10, discloses or suggests a configurable billing system. Moreover, even if the cited portion of Maruta could be construed as disclosing a configurable billing system, the cited portion does not disclose or suggest a coded billing strategy (e.g., FIG. 2, FIG. 4 of the present application).

For at least the foregoing reasons, **claim 1**, as well as **claims 2-5**, which depend therefrom is not anticipated and is not obvious in light of Maruta.

Furthermore, even if Maruta could be construed as disclosing a configurable billing system including a list of aspects of interest and a list of meter descriptions, Maruta does not disclose or suggest a method for allowing such lists to be arbitrarily long.

In this regard the Office Action indicates that the Examiner interpreted -- arbitrarily long-- as "at least one." However, it is respectfully submitted that this interpretation is inappropriate. The phrase "at least one" reads on fixed, unconfigurable, prior art billing systems such as Maruta. The phrase "arbitrarily long" reflects the configurable nature of the billing system and the coded billing strategy associated therewith and recited, for example, in **claim 1**.

It is respectfully submitted that Maruta does not disclose or suggest a configurable billing system including a coded billing strategy or a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long

list of meter descriptions.

For at least the foregoing additional reasons, **claim 1**, as well as **claims 2-5**, which depend therefrom, is not anticipated and is not obvious in light of Maruta.

With regard to **claim 2**, the Office Action directs the attention of the Applicants to column 11, lines 51-57, of Maruta. However, the cited portion discusses formats of image data and does not disclose or suggest a configurable billing system wherein the coded billing strategy further comprises information regarding a format in which information regarding the aspects of interest will be communicated to the billing system by the machine as recited in **claim 2**.

For at least the foregoing additional reasons, **claim 2** is not anticipated and is not obvious in light of Maruta.

Regarding **claim 3**, the cited portion of column 10 (lines 23-34) discusses detecting the size of the document and performance of an "ACS" process associated with a color determination. However, it is respectfully submitted that the cited portion of Maruta does not disclose or suggest that each meter in a list of meters included in a coded billing strategy is described as a function of at least one of the listed aspects of interest.

For at least the foregoing additional reasons, **claim 3** is not anticipated and is not obvious in light of Maruta.

Regarding **claim 4**, it is respectfully submitted that column 10, lines 43-53, discuss calculating the cost of printing. However, the cited portion of column 10 does not disclose or suggest a coded billing strategy comprising information associated with the listed meters, the information describing the function of the meters (see FIG. 2, **218, 222, 226, 230**; FIG. 4, **418, 422, 426**, of the present application).

Regarding **claims 5 and 7**, column 10, lines 4-21, of Maruta, cited by the Office Action, mention clearing a memory area corresponding to the cost storage and does not disclose or suggest a plurality of meters are instantiated in memory. However, even if the cited portion of Maruta could be construed as disclosing a plurality of meters instantiated in memory, Maruta does not disclose or suggest a plurality of meters instantiated in memory, by a billing module, according to a coded billing strategy or billing strategy description (e.g., see FIG. 2, **210**; FIG. 4, **410**) as recited in **claims 5 and 7**.

For at least the foregoing additional reasons, **claims 4, 5 and 7** are not anticipated and are not obvious in light of Maruta.

Regarding independent **claims 16, 19 and 22**, the Office Action asserts that Maruta discloses a document processing system comprising a configurable billing system operable to follow a billing strategy specification including an arbitrarily long list of document product events of interest, an arbitrarily long list of meter descriptions and a machine-readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy defined for the machine.

In support of this assert, the Office Action directs the attention of the Applicants to column 9, lines 29-53, and column 10, lines 1-10. Additionally, in support of the assertion that Maruta discloses a marker module operative to control the print engine in the production of documents, and to report document production events to the billing system, the Office Action directs the attention of the Applicants to column 10, lines 43-63.

However, column 10, lines 1-10, has been discussed above and does not disclose or suggest a configurable billing system operative to follow a billing strategy specification including an arbitrarily long list of document production events of interest and an arbitrarily long list of meter descriptions or a machine-readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy defined for the machine.

Column 9, lines 20-53, discuss a cost calculation and the use of four specific meters associated with that calculation. It is respectfully submitted that the cited portion of column 9 does not disclose or suggest a configurable billing system operable to follow a billing strategy specification including an arbitrarily long list of document production events of interest, an arbitrarily long list of meters descriptions and a machine-readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy. It is respectfully submitted that the combination of the cited portions of column 9 and the upper portion of column 10 does not disclose or suggest a configurable billing system, a configurable billing system operable to follow a billing strategy specification, or a configurable billing system operable to follow a billing strategy specification including an arbitrarily long list of documents production events of

interest, an arbitrarily long list of meter descriptions and a machine readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy defined for the machine.

Additionally, it is respectfully submitted that column 10, lines 43-62, discuss events that occur prior to printing a document. Column 10, lines 63-65, discuss the pressing of an "OK" button which initiates (S143) a copy operation. Therefore, column 10, lines 43-63, does not disclose or suggest a marker module operative to control the print engine in the production of documents, and to report document production events to a billing system.

For at least the foregoing reasons, independent **claims 16, 19 and 22**, as well as **claims 17-18**, which depend from **claim 16**, are not anticipated and are not obvious in light of Maruta.

With regard to **claim 17**, the Office Action cites column 10, lines 43-63, of Maruta. However, as explained above, the cited portion of Maruta discuss steps involved in calculating a printing cost and do not disclose or suggest a marker module delivering a billing strategy to a billing system.

For at least the foregoing additional reasons, **claim 17** is not anticipated and is not obvious in light of Maruta.

With regard to **claim 23**, the Office Action asserts that Maruta discloses a document processor including a billing strategy file defining a billing strategy in machine-readable form, the billing strategy file describing an arbitrarily large number of mathematical functions of an arbitrarily large number of meters for processing and recording information reported by the at least one aspect sensor, and directs the attention of the Applicants to column 10, lines 1-10, in support of the assertion. Additionally, the Office Action asserts that Maruta discloses a billing module operative to receive the billing strategy file and instantiate the arbitrarily large number of meters according to the billing strategy and directs the attention of the Applicants to column 10, lines 43-63, in support of the assertion.

However, column 10, lines 1-10, indicate that when a "cost calculation" is selected at an initial screen of FIG. 8A, the rate is displayed according to the cost calculation process, and a copy operation process is executed after confirmation is made of the indicated cost. It is respectfully submitted that column 10, lines 1-10, does not disclose or suggest a billing strategy file. Furthermore, the cited portion of

column 10 does not disclose or suggest a billing strategy specification file defining a billing system. Furthermore, column 10, lines 1-10, does not disclose or suggest a billing strategy file describing an arbitrarily large number of mathematical functions of an arbitrarily large number of meters for processing and recording information reported by the at least one aspect sensor.

It is respectfully submitted that the lower portion of column 10 (lines 43-63) is directed toward a method for calculating an estimate of the cost of producing a document and displaying the cost to a user. Column 10, lines 43-63, does not disclose or suggest a billing module operative to receive a billing strategy file. Furthermore, column 10, lines 43-63, does not disclose or suggest a billing module that is operative to instantiate an arbitrarily large number of meters according to the billing strategy.

For at least the foregoing reasons, **claim 23** is not anticipated and is not obvious in light of Maruta.

The Claims are not Obvious

Claims 8-15 and **18** were rejected under 35 U.S.C. 103(a) as being unpatentable over Maruta. However, **claims 8-15** depend from **claim 6** and are not anticipated and are not obvious for at least that reason. Additionally, it is respectfully submitted that Maruta does not disclose a flexible or configurable billing system that can be configured to consider an impression count or impression event flag when, for example, associated with a first document processor and to consider a set count or set completion flag when, for example, associated with a second document processing system.

For at least the foregoing reasons, **claims 8-15** are not anticipated and are not obvious in light of Maruta.

Claim 18 depends from **claim 16** and is not anticipated and is not obvious for at least that reason.

Telephone Interview

In the interests of advancing this application to issue the Applicant(s) respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

CONCLUSION

Claims 1-23 remain in the application. For at least the foregoing reasons, it is submitted that all the claims remaining in the application (**claims 1-23**) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

Respectfully submitted,

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